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Lower bound for the average sample size and the efficiency of ranking sequential procedures

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Abstract

© 2014 Society for Industrial and Applied Mathematics. Some bounds for the average sample size are established for procedures of ranking of populations in the increase of the order of the value of a real parameter when the fixed probability of the correct decision is guaranteed. Similar bounds for the sequential selection procedures have been obtained in [I. A. Kareev, Theory Probab. Appl., 57 (2013), pp. 227–242]. The universal Volodin-Malyutov bounds are used [M. B. Malyutov, Izv. Vyssh. Uchebn. Zaved. Mat., 11 (1983), pp. 19–41 (in Russian)], [I. N. Volodin, Theory Probab. Appl., 24 (1979), pp. 120–129]. The results obtained are applied to an estimation of efficiency of the Bechhofer ranking sequential procedure [R. E. Bechhofer, Ann. Math. Statist., 25 (1954), pp. 16–39].

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Keywords

Efficiency, Lower bounds of the average sample size, Ranking of populations